

IN THE CLAIMS:

Claims 1-10. (Canceled)

Claim 11. (New) A process comprising applying a multi-layer coating on a substrate using a coating agent and curing said coating; wherein the coating agent contains resin solids comprising

- (a) 10 wt-% to 80 wt-% of a non-aromatic polyester polyol,
- (b) 0 wt-% to 70 wt-% of at least one constituent selected from the group consisting of hydroxyl-functional binders that are different from polyester polyol (a), hydroxyl-functional reactive thinners and combinations thereof, and
- (c) 20 wt-% to 60 wt-% of at least one cross-linking agent for the hydroxyl-functional components (a) and (b),

wherein the polyester polyol (a) is a branched structure having a calculated molecular mass from 600 to 1400, an acid value from 0 to 30 mg KOH/g and a hydroxyl value from 250 to 600 mg KOH/g with a calculated hydroxyl functionality from 4.5 to 10, and is composed of randomly positioned components consisting

- (a1) hydroxyl components comprising 0 wt-% to 20 wt-% of at least one diol and 80 wt-% to 100 wt-% of at least one polyol having 3 to 6 hydroxyl groups,
- (a2) carboxyl components comprising 0 wt-% to 20 wt-% of at least one monocarboxylic acid and 80 wt-% to 100 wt-% of at least one dicarboxylic acid, and optionally
- (a3) at least one hydroxycarboxylic acid component,

the sum of the percentages by weight of components (a) to (c), of components (a1) and of components (a2) being 100% in each case.

Claim 12. (New) A process for forming a coating layer as one coating layer of a multi-layer coating comprising:

applying to a substrate a coating layer comprising a coating agent and curing said coating layer;

wherein the coating agent contains resin solids comprising

- (a) 10 wt-% to 80 wt-% of a non-aromatic polyester polyol,
 - (b) 0 wt-% to 70 wt-% of at least one constituent selected from the group consisting of hydroxyl-functional binders that are different from polyester polyol (a), hydroxyl-functional reactive thinners and combinations thereof, and
 - (c) 20 wt-% to 60 wt-% of at least one cross-linking agent for the hydroxyl-functional components (a) and (b),
- wherein the polyester polyol (a) is a branched structure having a calculated molecular mass from 600 to 1400, an acid value from 0 to 30 mg KOH/g and a hydroxyl value from 250 to 600 mg KOH/g with a calculated hydroxyl functionality from 4.5 to 10, and is composed of randomly positioned components consisting
- (a1) hydroxyl components comprising 0 wt-% to 20 wt-% of at least one diol and 80 wt-% to 100 wt-% of at least one polyol having 3 to 6 hydroxyl groups,
 - (a2) carboxyl components comprising 0 wt-% to 20 wt-% of at least one monocarboxylic acid and 80 wt-% to 100 wt-% of at least one dicarboxylic acid, and optionally
 - (a3) at least one hydroxycarboxylic acid component,
- the sum of the percentages by weight of components (a) to (c), of components (a1) and of components (a2) being 100% in each case.

Claim 13. (New) The process according to claim 12, wherein the coating layer is selected from the group consisting of an external pigmented top coat layer and transparent clear coat layer.

Claim 14. (New) The process according to claim 12, wherein the substrate is provided with a color-imparting and/or special effect-imparting base coat and the coating agent applied thereon as a transparent clear coat.

Claim 15. (New) The process according to claim 12, wherein the substrate is selected from the group consisting of automotive bodies and body parts.

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Claim 16. (New) The process according to claim 12, wherein the polyester polyol (a) comprises 30 wt-% to 60 wt-% of at least one hydroxyl component (a1), 30 wt-% to 70 wt-% of at least one carboxyl component (a2) and 0 wt-% to 10 wt-% of at least one hydroxycarboxylic acid component (a3).

Claim 17. (New) The process according to claim 12, wherein the hydroxyl component (a1) consists of at least one (cyclo)aliphatic polyol having 3 to 6 hydroxyl groups.

Claim 18. (New) The process according to claim 12, wherein the carboxyl component (a2) consists of at least one dicarboxylic acid.

Claim 19. (New) The process according to claim 12, wherein the polyester polyol (a) comprises dimmer fatty acid as one of at least two dicarboxylic acids of the carboxyl component (a2) corresponding to a weight ratio from 5 wt-% to 45 wt-% of dimmer fatty acid and 55 wt-% to 95 wt-% of at least one additional dicarboxylic acid.

Claim 20. (New) The process according to claim 12, wherein the cross-linking agent (c) is selected from the group consisting of aminoplastic resins, free polyisocyanates, blocked polyisocyanates, transesterification cross-linking agents or combinations thereof.

Claim 21. (New) The process according to claim 12, selected from the group consisting of aqueous coating agents and coating agents based on organic solvents.